National Rural Health Information Technology Workforce Summit Summary

September 22nd, 2009

The information contained in this document was compiled from the Summit held in Washington, D.C. on September 22nd, 2009. This summary includes overall recommendations from the Summit.. The topics for the recommendations include: Data Development; Workforce Resources; and Policy. White papers on these three topics are being developed and will be available in 2010.

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Overview

Sally Buck, Rural Health Resource Center

Many national health care leaders have speculated that a new workforce crisis is emerging. This crisis will impact the Presidential mandate to employ needed health information technologies (HIT) in health care delivery systems across this country. As the U.S. health care industry begins to convert antiquated paper record systems to modern information technology systems, it lacks a comprehensive plan to educate an HIT workforce that will support this transformation. As a result, the ability to hire HIT professionals may become a serious limiting factor in the adoption and implementation of electronic health records (EHR) and other health information technologies, especially in rural America.

Meeting the increasing demands will require responses from both the U.S. health care industry and institutions of higher education. While many training programs are available nationally, an insignificant amount of data currently exists about the capacity of these programs. In order to align educational and training resources with anticipated needs, more quantitative data is required.

The National Rural HIT Coalition, a group broadly representing all aspects of rural health care, has recently adopted a consensus statement calling for the development of a national study of HIT workforce and has formed a Rural HIT Workforce sub-group. This organization has advanced the rural HIT dialogue by hosting a national HIT Workforce Summit during the Healthcare Information and Management Systems Society HIMSS HIT Week, September 22, 2009 in Washington, DC. **T**he National Rural HIT Coalition has been in existence since 2006. The Rural Health Resource Center staffs the Coalition as a part of the Health Resources and Services Administration's (HRSA) Office of Rural Health funded Technical Assistance and Services Center (TASC) for the Rural Hospital Medicare Flexibility Program. The below report is a summary of the HIT Workforce Summit and leads toward to development of a national study of the HIT workforce.

HIT Workforce Summit Objectives

- Identify rural HIT workforce shortage issues
- Understand the gaps in rural HIT workforce and what needs to be done
- Develop rural HIT workforce recommendations

Overall Summit Recommendations

Participants broke into three groups and discussed strategies, actions, stakeholders, resources, and timelines for Data Development, Policy, and Workforce Resources. Below are the overall Summit recommendations.

Data Development

Strategy: Determine the backgrounds, job roles, and career pathways for those who work in health IT. This should be done by conducting a comprehensive, national workforce study to inform needs based on demand.

Actions: Identify job types, required education and training, and career progression pathways, differentiating between rural and urban settings. Inform stakeholders of the results, especially organizational health care leaders as well as prospective workers seeking career guidance and education. It will also be necessary to continue data collection over time, as job roles and competencies are likely to change as EHR adoption increases and progresses to more advanced levels.

Stakeholders: Consumers, healthcare providers, students, health care organizations, educational institutions, states, and rural healthcare systems.

Resources: Money, time, American Recovery and Reinvestment Act of 2009, (ARRA) recipients reports, the Office of the National Coordinator (ONC),

Agency for Healthcare Research and Quality (AHRQ), and HRSA Workforce Research Center.

Time: While a comprehensive workforce assessment will take considerable time and resources, methodology development and preliminary data collection can begin immediately. This is important as the need for the research to give guidance to healthcare organizations implementing health IT becomes critical to achieve ARRA EHR adoption incentives starting in 2011.

Policy

Strategy: Identify gaps in current federal program eligibility. Determine potential funding streams from across federal agencies. Build awareness of the issue among federal agency HIT leaders. Ensure flexibility and create organic policy so it cuts across all federal lines. Work with federal incentives and require collaboration for an integrated network. Encourage compatibility among state requirements with state level programs aligned among different states. There is a need for interdisciplinary training.

Action: Coordinate among federal partners for IT. Seek federal funding under: ARRA HITECH; through pending healthcare reforms; and existing authorizations. Create business models and create certification programs. Identify a rural health organization to lead rural HIT workforce policy message.

Stakeholders: Federal: National Governors Association, Congressional Delegates, National Conference of State Legislatures
Private: American Healthcare Informatics Association; American Medical Informatics Association; The Commonwealth Fund; Markle Foundation; Robert Wood Johnson Foundation, , Kellogg Foundation, for-profit technical schools

Other For-profit technical schools, Land Grant Colleges, Physicians, national rural health organizations.

Resources: Toolkits, co-ops, best practices, AT&T, IBM, Cerner, Department of Defense, VA, and HIT Reginal Extension Centers.

Time: One month for talking points and toolkit

Workforce Resources

Strategy: Examine and document what HIT education programs currently exist. Assess new skills sets needed to prepare IT workforce for the future. Identify current workforce re-training opportunities. Create 'stackable' certificates and advanced degree programs that can meet rural needs. Promote interdisciplinary education. Consider hospital HIT Education (in-house w/credit). Ensure attention to multi-cultural, multi-lingual needs in patient-centered electronic health records.

Action: Create a sustainable business plan and template for small and remote health providers. Build modules for workforce retraining in CEUs required for health professionals. Look to returning veterans that have IT skills. Market to the young. Pipeline development and Networks (follow other models such as SISU Medical Systems or Inland Northwest Health Services (INHS).

Stakeholders: Educational institutions, state boards (integrate HIT into certification), and WICHE (The Western Interstate Commission for Higher Education created its Internet Course Exchange (WICHE ICE) to enable states and higher education institutions (public and private, two- and four-year institutions) to share online academic courses and programs in a range of disciplines. WICHE ICE could be used by institutions to offer Health IT courses online, with some institutions teaching the courses and some institutions purchasing seats in the courses or an entire section of an existing course).

Resources: Loan repayment programs/scholarships, international models, and Department of Labor.

Time: Short Term: Incentives (w/in 6 months).
Long Term: Content/curriculum development, Integrate curriculum into health care professional training.

Rural HIT Workforce Issues – Identifying the Gaps

William Hersh, MD, Oregon Health & Science University
(See slide presentation for complete details – key points from presentation listed below)

There are various traditional groupings of HIT workforce professionals. These include: Information technology (IT) professionals, who usually have computer science or information systems backgrounds; Health information management (HIM) professionals with a historical focus on medical records; and Clinical informatics (CI) professionals who usually have health care backgrounds. Other professions often associated with this HIT workforce include librarians and trainers.

Most studies have focused on professional groupings in the HIT workforce, usually IT or HIM staffing. A report from Gartner Research on IT staffing in integrated delivery systems (Shaffer, 2008) showed that about 2.1% of organizational full-time equivalents (FTE) are within IT. This equates to one IT staff per 48 non-IT employees. The typical IT job functions identified in the study were programmer/analyst (49%), management (15%), and technical support/help desk (13%). Other functions reported included computer operations (8%), telecommunications/ network support (7%), administration (3%), and security (2%).

An assessment was conducted of the "informatics" workforce in the English National Health Service (NHS) (Eardley, 2006) of an estimated 25,000 FTEs among 1.3 million employees in NHS. Among the NHS staff, one IT staff was identified per 52 non-IT employees. The majority of these IT workers were categorized as information and communication technology (37%), health records (26%), and information management (18%). Other IT staff were identified as knowledge management staff (9%), senior managers (7%), and clinical informatics staff (3%). Issues identified in this study included retention problems that were attributed to uncompetitive pay and an anticipated future skills shortage. It was identified that there was strong support for establishment of formal informatics profession.

The Nationwide Health Information Network (NHIN) Workforce Study (Altrum, 2007) estimated the workforce needed to implement NHIN nationally over five-year implementation time. These needs included:

- 7,600 FTE for installation of EHRs for 400,000 practicing physicians who do not currently have EHRs,
- 28,600 FTE for 4,000 hospitals that need EHRs,
- 420 FTE to implement the health information infrastructure.

Health Information Management workforce needs are available from the U.S. Bureau of Labor Statistics occupational employment projections for 2006-2016 (Dohm, 2007). These predicted needs include a 17.8% employment growth in Medical Records and Health Information Technicians (about 170,000 employed now, increasing to 200,000 by 2016). It is estimated that 76,000 jobs will be open due to growth and net replacements from 2006-2016.

The HIT needs have been modified due to the agenda laid out in the American Recovery and Reinvestment Act (ARRA) of 2009, including needs associated with health care reform. The Office of the National Coordinator for HIT has defined six different types of HIT workers for ARRA-driven EHR adoption, with an estimated need for 50,000 workers (Monegain, 2009). The categories of workers needed include:

- Implementation technical support staff
- Implementation support managers
- Workflow redesign specialists
- Clinical consultants
- Software support specialists
- Trainers

The following implications for practice and education exist with the immediate need for a major increase in HIT workforce.

- ***Transformation of Environment***

Informatics has become more of an organizational strategy than a research area. With this, the need for expertise is more substantial in implementation than development.

- ***Transformation of Workforce Needs***

Greater needs now exist for HIT for professionals than HIT researchers. Professional HIT certification is coming (e.g., for physicians, Gardner, 2009; Sarfan, 2009).

- ***Transformation of Education***

In order to respond to a large demand for a variety of HIT workers, education will need to be responsive and flexible through specific courses on-line as well as degree programs to support an evolving industry.

Identifying Rural Workforce Priorities – Discussion Summary

There is currently no clear pathway to an HIT career. What can we do in the short-term to build these skills in our workforce? What are the competencies that we want/need?

The original intent of the Summit was to focus on putting together a research study on workforce issues. However, since has ARRA introduced stimulus money that is tied to an immediate timeline, the time no longer exists for such study. It was suggested that if research is conducted, that it should look at programs that have successfully educated HIT workers.

Discussion then focused on currently existing educational program for HIT. Research shows that 85% of IT grads are coming from 2-year degree or certificate programs. The community colleges working to develop new IT programs need to be included in the discussion of the workforce needs so their programs can adapt. In addition, outreach is needed to engage younger populations in an HIT education and career.

The American Medical Informatics Association (AMIA) has a list on their web site of more than two dozen informatics education programs throughout the nation. (http://www.amia.org/informatics-academic-training-programs) AMIA has also developed the 10x10 program that aims to provide introductory training to build the workforce that will enable information technology to improve the quality, safety, and cost-effectiveness of health care. Additional accrediting associations that have endorsed programs described in this document are: Commission on Accreditation for Health Informatics and Information (CAHIIM) and the American Nursing Informatics Association (ANIA).

The Participants Identified Key Aspects in Planning for Rural HIT Workforce

Short-term Goals:

1. All worker types are needed (Not just IT support)
2. Co-ops providing HIT services
3. Online education
4. Training incumbent health care workers
5. Funding for tuition at various levels (federal and state loan repayment programs)
6. Sharing workers through a network
7. Send recommendations to HIT RECs

Long-term Goals:

1. Develop outreach for high school students about HIT careers

• Dual enrollment/high school and community college
• Pathway to bachelor's degree from associate degree (demonstrate the incentive for seeking an advanced degree)

2. Faculty production goals for various levels of HIT workers
3. An agreed upon (or mandated) curriculum for pathways including core competencies
4. Develop one academic discipline to bring together HIM, Informatics and Clinical

Resources Currently Available on the HIT Workforce Landscape

Summit participants described resources, tools, needs and objectives that exist within their organizations.

Department of Labor

Stuart Werner

■ DOL awards to be made in Fiscal Year 2010 on HIT

■ Visit the list of 'career ladders' on the DOL web site(http://www.careeronestop.org/competencymodel/CareerPathway/CPWCIIInstructions.aspx) for ideas on how to develop career ladders for HIT.

Stakeholders can sign up for free access to DOLETA webinars and grantee resources. Once you're registered, you can search the site for products and resources by keywords.
http://www.workforce3one.org/login.aspx

DOLETA Investment Centers for High Growth and Community Based Job Training Grants related to health care. http://www.doleta.gov/brg/grants/eta_default.cfm?type=both&attribute=by_industry Follow the link below and you'll find a One-Pager with information about St. Petersburg College, FL, and a Health Care Informatics' program. http://www.doleta.gov/brg/grants/pdf/St.%20Petersburg%20College%20FINAL.pdf

- Use the state nursing workforce teams as a model for ramping up a tiered workforce.

- DOL supports career pathways; looking at different educational pathways because there are so many variations on the IT theme.

- Center to Champion Nursing in America is a good model on nurse educations and retention http://championnursing.org/

Indian Health Services (IHS)

Christopher Lamer

- IHS uses the Resource and Patient Management System (RPMS) for their EHR which started in 2004. Initially they had a 'clinical applications coordinator' that worked full-time during implementation, then went to part-time or to multiple sites when implementation was completed.

- IHS used the 'train the trainer' scenario, which started at the IHS headquarters and then went to other locations.

- A listserv was created for all the sites that were implementing so they could communicate with each other about concerns and issues.

Office of Rural Health Policy (ORHP)

Mike McNeely

- ORHP has currently not addressed HIT workforce. TASC will be receiving additional HIT funding from ORHP and HIT workforce could be a topic that is pursued with this funding.

- As seen in the Critical Access Hospital HIT (CAH HIT) Network Implementation Grant, IT workers are being head-hunted away from rural by larger facilities.

- It is possible that 3RNet will expand their rural recruitment and retention focus to include HIT workforce. http://www.3rnet.org/

Office for the Advancement of Telehealth (Office of Advanced Telehealth) (OAT)

Dena Puskin

- The focus at OAT has been on community health center (CHC) grants for HIT. To encourage CHCs to speed up implementation, OAT promoted networks, of which some were very successful.

- Community HIT co-ops are models to consider. HIT workforce and facilities needing HIT can connect at all levels. With the stimulus money, everyone wants their own but leveraging resources, skills, and funding with co-ops can provide a greater outcome.

National Organization of State Offices of Rural Health (NOSORH)

Lynette Dickson

- NOSORH supported this Summit for HIT Workforce through a partnership grant. Currently, there is not another specific workforce project in NOSORH, but all State Offices of Rural Health (SORHs) are involved in workforce and they are not competitive with each other.

- NOSORH is working on keeping states current on HIT issues.

- NOSORH can network between SORHs for expertise to bring resources to the state or national level.

- NOSORH's membership includes 50 states that work together on issues and challenges.

How Do We Capture Resources and Advocate for Rural Solutions – Discussion Summary

How do we recruit and retain IT staff to rural areas? What is the sustainability for workforce after when grants end? Through group discussion, the following solutions were identified.

Community Engagement: Create a community of support from the bottom-up. If there is a best practice at the community level, grow it to meet the state needs. All rural health providers and communities need help on how to grow their own workforce to stay in their rural areas.

Existing Workforce: Cross train professionals in the health care workforce. Use the Indian Health Services 'Clinical Applications Coordinator' as a model.

Funding: Use existing grants to help with costs (HRSA, Loan repayment, USDA broadband, etc.). Demonstrate that HIT has a return on investment.

Networks: Partners should collaborate with all appropriate workforce training centers to develop co-ops, collaborations, networks in rural areas to share knowledge, resources, and staff. Share best practices and prepare for turnover.

Partnerships: Do not duplicate the work of Area Health Education Centers (AHECs). Use AHECs to start educating for HIT (continuing ed). Develop a common message to HRSA leadership. Partner with the local HIT REC. Partners need to be working with junior high and high schools to recruit future IT professionals.

Recruitment: Focus on the category of workers, especially the cultural change aspects. Recruit military-trained IT workforce. Develop multiple levels of recruitment for outreach/marketing. We need a national HIT spokesperson to market and promote HIT careers. Recruit all past and present IT skilled military workforce and create a bridge with present educational training centers to more quickly get them into a program and back out into the community.

Training: Use the emergency preparedness model and federal training programs such as public health as a template for training. Also use HIT Regional Extension Centers (HIT RECs) and Area Health Education Centers (AHECs) for training and use "train the trainer" models. The Veterans Health Administration (VA) could also be a good model. The VA provides training and education and has a large stake in what happens in rural. The VA was successful because of their workflow processes – physicians trained by physicians, etc.

Sponsors: *The Rural HIT Workforce Summit was sponsored by the following organizations:*

- Rural Health Resource Center
- National Organization of State Offices of Rural Health (NOSORH)
- Stratis Health, Inc.
- Texas Organization of Rural and Community Health Centers (TORCH)

The National Rural HIT Coalition has been in existence since 2006. The Rural Health Resource Center staffs the Coalition as a part of the Health Resources and Services Administration's (HRSA) Office of Rural Health funded Technical Assistance and Services Center (TASC) for the Rural Hospital Medicare Flexibility Program. The National Rural HIT Coalition would like to acknowledge the involvement of the following organizations: the Office of Rural Health Policy, HIMSS Institute for e-Health, and the coordination efforts of the Rural Health Resource Center.

Participants: The following is a list of participants that attended the Summit: Chair - Marty Witrak (College of St. Scholastica); Facilitator - Sally Buck (Rural Health Resource Center); Aarron Reinert (Lakes Region EMS); Alison Hughes (Arizona State Office of Rural Health); Bill Hersh (Oregon Health and Sciences University); John Barnas (Michigan Center for Rural Health); Kate Stenehjem (Rural Health Resource Center); Keith Williams (Community Health Network, Inc.); Lynette Dickson (North Dakota Center for Rural Health); Neal Neuberger (HIMSS, Health Tech Strategies); Nicole Clement (Rural Health Resource Center); Roxanne Fulcher (American Association of Community Colleges); Rod Piechowski (American

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